



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,699	03/07/2002	Steven P. Spagnuolo	TRW(M)5964	2501

26294 7590 05/09/2003

TAROLLI, SUNDHEIM, COVELL, TUMMINO & SZABO LLP
1111 LEADER BUILDING
526 SUPERIOR AVENUE
CLEVEVLAND, OH 44114-1400

EXAMINER

DUNN, DAVID R

ART UNIT	PAPER NUMBER
----------	--------------

3616

DATE MAILED: 05/09/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,699

Applicant(s)

SPAGNUOLO ET AL.

Examiner

David Dunn

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The Preliminary Amendment filed 1/16/02 is acknowledged.

Information Disclosure Statement

1. The information disclosure statement filed 3/7/02 is acknowledged. See enclosed IDS form.

Specification

2. The disclosure is objected to because of the following informalities:
on page 5, line 1, "steering wheel 26" should be --steering wheel 22--;
on page 7, line 9, "rack 80" should be --rack 20--.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "said axis" in lines 7 & 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Sukigara et al. (6,234,704).

Sukigara et al. discloses a vehicle steering linkage (see column 1, lines 1-5) member comprising: a socket (2; see Figure 2); and a stud (10) having a ball end portion (11) received in the socket and supported for pivotal movement relative to said socket, said stud having a longitudinal axis, said stud having a shank portion (12) projecting from the socket and centered on the axis; said shank portion of the ball stud including a predetermined weakened portion (15), said predetermined weakened portion buckling under a predetermined amount of force (see for example, column 5, lines 50-60).

7. Claims 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Haldric et al. (5,141,248).

Haldric et al. discloses a linkage member (10) comprising: a shank (12) including a relief area (125) at a predetermined location along the longitudinal axis, said shank buckling (see Figure 2) at the relief area under a predetermined amount of axially applied force, said shank at

Art Unit: 3616

the relief area having a cross-sectional configuration that is not centered on the axis (see offset "d"). The relief area is eccentric to the longitudinal axis by a distance that is greater than any other eccentric portion of the shank.

8. Claims 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al. (6,298,962).

Kato et al. discloses a linkage member (see Figure 5A) comprising: a shank (101) including a relief area (107) at a predetermined locating along the longitudinal axis, said shank buckling (see for example, Abstract, etc.) at the relief area under a predetermined amount of axially applied force, said shank at the relief area having a cross-sectional configuration that is not centered on the axis (see Fig. 5C and 6B). Also, see Figure 7A, the cross-section configuration of relief 108 is lower than the longitudinal axis of the shank 102.

As seen in Figures 5B & 5C, the cross sectionals are circular. The weakened portion is eccentric by a distance greater than the maximum bending amount in the shank.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sukigara et al. in view of Kato et al.

Sukigara et al. is discussed above and fails to the weakened portion being not centered on the longitudinal axis of the stud.

Kato et al. is discussed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sukigara et al. with the teachings of Kato et al. in order to provide the weakened portion with a simpler and cheaper construction.

With respect to claims 7-9, 13 , it would have been obvious to construct the shank and weakened portions of any size required by the steering linkage of the particular vehicle.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. alone.

In column 7, lines 5-10, Kato et al. notes that the diameter of the arm is in the range of 15 to 35 mm.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kato et al. in order to construct and relief area and eccentricity of such sizes as claimed as required by specific different uses. It is noted that such changes in size involve only routine skill in the art. *In re* Rose, 105 USPQ 137.


Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baker et al. shows a steering shaft with a predetermined relief area. Di Stefano shows a sacrificial tube of interest. Huber shows a suspension of interest with weakened portions.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Dunn whose telephone number is 703-305-0049. The examiner can normally be reached on Mon-Thur, alt. Fridays, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-1113.



David Dunn
Examiner
Art Unit 3616